

IN THE CLAIMS:

Claims 1, 7, 11, and 19 have been amended herein. Please note that all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A field emission tip, comprising a structure comprising at least one of semiconductive material and conductive material, said structure including:  
a periphery with an at least substantially vertical sidewall portion and an inclined sidewall portion with no discernable boundary between said substantially vertical sidewall portion and said inclined sidewall portion; and  
an apex at the top of said structure.
2. (previously amended) The field emission tip of claim 1, wherein a height of said at least substantially vertical sidewall portion exceeds a width of said structure.
3. (original) The field emission tip of claim 1, wherein said apex comprises a low work function material. *enablement*
4. (original) The field emission tip of claim 3, wherein said low work function material is selected from the group comprising aluminum titanium silicide, titanium silicide nitride, titanium nitride, tri-chromium mono-silicon, and tantalum nitride.
5. (original) The field emission tip of claim 1, wherein said apex has a lateral width of less than about 100 nm.

6. (original) The field emission tip of claim 1, wherein said apex has a lateral width of less than about 50 nm.

7. (Currently Amended) A field emission tip, comprising a structure comprising at least one of semiconductive material and conductive material, said structure including:

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a periphery with an at least substantially vertical portion and an inclined sidewall portion with no discernable boundary between said substantially vertical sidewall portion and said inclined sidewall portion; and

an apex at the top of said structure, said apex having a lateral width of less than about 100 nm.

8. (original) The field emission tip of claim 7, wherein said apex has a lateral width of less than about 50 nm.

9. (original) The field emission tip of claim 7, wherein said apex comprises a low work function material. *112*

10. (original) The field emission tip of claim 9, wherein said low work function material is selected from the group comprising aluminum titanium silicide, titanium silicide nitride, titanium nitride, tri-chromium mono-silicon, and tantalum nitride. *112*

11. (Currently Amended) A field emission array, comprising:  
a substrate; and  
at least one substantially pointed tip protruding from said substrate, said at least one substantially pointed tip comprising at least one of a semiconductive material and a conductive material, said at least one substantially pointed tip including a periphery, at least a first portion of said periphery being oriented substantially perpendicularly relative to said substrate and at least a second portion of said periphery being oriented at an angle relative

to said substrate, with no discernable boundary between said first portion and said second portion.

12. (original) The field emission array of claim 11, wherein at least said portion of said periphery is adjacent said substrate.

13. (original) The field emission array of claim 11, wherein a height of at least said portion of said periphery relative to said substrate exceeds a width of said at least one substantially pointed tip.

14. (original) The field emission array of claim 11, wherein a top portion of said at least one substantially pointed tip comprises a low work function material.

15. (original) The field emission array of claim 14, wherein said low work function material is selected from the group comprising aluminum titanium silicide, titanium silicide nitride, titanium nitride, tri-chromium mono-silicon, and tantalum nitride. 112

16. (original) The field emission array of claim 11, further comprising redeposition material adjacent at least a portion of said periphery.

17. (original) The field emission array of claim 11, wherein an apex of said at least one substantially pointed tip has a lateral width of less than about 100 nm.

18. (original) The field emission array of claim 11, wherein an apex of said at least one substantially pointed tip has a lateral width of less than about 50 nm.

19. (Currently amended) A field emission display, comprising:  
an anode display screen;

a cathode spaced apart from said anode display screen, said cathode including:

a substrate;

at least one substantially pointed tip protruding from said substrate, said at least one substantially pointed tip comprising at least one of a semiconductive material and a conductive material, said at least one substantially pointed tip including a periphery, at least a first portion of said periphery being oriented substantially perpendicularly relative to said substrate and at least a second portion of said periphery being oriented at an angle relative to said substrate with no discernable boundary between said first portion and said second portion; and

a gate through which said at least one substantially pointed tip is exposed;

a substantial vacuum between said anode display screen and said cathode; and

a voltage source associated with said anode display screen, said gate, and said cathode to provide a potential difference between said cathode and said gate and between said cathode and said anode display screen.

20. (original) The field emission display of claim 19, wherein at least said portion of said periphery is adjacent said substrate.

21. (original) The field emission display of claim 19, wherein a height of at least said portion of said periphery relative to said substrate exceeds a width of said at least one substantially pointed tip.

22. (original) The field emission display of claim 19, wherein a top portion of said at least one substantially pointed tip comprises a low work function material. 112

23. (original) The field emission display of claim 22, wherein said low work function material is selected from the group comprising aluminum titanium silicide, titanium silicide nitride, titanium nitride, tri-chromium mono-silicon, and tantalum nitride.

24. (original) The field emission display of claim 19, further comprising redeposition material adjacent at least a portion of said periphery.

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25. (original) The field emission display of claim 19, wherein an apex of said at least one substantially pointed tip has a diameter of less than about 100 nm.

26. (original) The field emission display of claim 19, wherein an apex of said at least one substantially pointed tip has a diameter of less than about 50 nm.

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**IN THE DRAWINGS:**

Applicants submit herewith, under cover of a separate Letter to the Official Draftsperson, proposed corrections to FIGS. 18 through 23 of the drawings. Specifically, FIGS. 18 through 23 have been revised to designate the drawings as prior art. All proposed corrections have been marked in red. Applicants respectfully request approval of the corrections to the drawings. Applicants also submit herewith corrected formal drawings, under cover of a separate Transmittal of Formal Drawings. Applicants respectfully request approval of the corrected formal drawings.

The attached sheet of drawings includes changes to FIGS. 2 and 18 through 23. These sheets, which include FIGS. 1 through 3 and FIGS. 16 through 23, replace the original sheets including FIGS. 1 through 3 and FIGS. 16 through 23.

**IN THE TITLE:**

Pursuant to 37 C.F.R. §§ 1.121(b)(2)(i) and 1.121(b)(2)(ii), please delete the title of the invention and replace it with the text enclosed in clean form hereinbelow.

FIELD EMISSION TIPS, ARRAYS, AND DEVICES